CLAIMS

[1] An Internet connection terminal apparatus which can be connected to the Internet via a relay device, said apparatus comprising:

5   a sending unit operable to send, via the relay device, a name resolution request using a non-existing host name or domain name, to a server which performs a name resolution using a host name or a domain name; and

        an Internet connection status determining unit operable to

10 determine, based on a response to the name resolution request, an Internet connection status that indicates whether or not said Internet connection terminal apparatus is connected to the Internet.

[2] The Internet connection terminal apparatus according to

15 Claim 1,

        wherein said Internet connection status determining unit is operable to determine that said Internet connection terminal apparatus is connected to the Internet in the case where the response to the name resolution request has been sent back within

20 a predetermined period of time, and to determine that said Internet connection terminal apparatus is not connected to the Internet in the case where the response to the name resolution request has not been sent back within the predetermined period of time.

25 [3] The Internet connection terminal apparatus according to Claim 2,

        wherein the response to the name resolution request is a response which corresponds to a failure of the name resolution in the server.

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[4] The Internet connection terminal apparatus according to Claim 1,

wherein the server is a Domain Name System (DNS) server.

[5]   The Internet connection terminal apparatus according to Claim 1, further comprising:

5   a storing unit operable to store determination result information that indicates the Internet connection status obtained by said Internet connection status determining unit; and

a communicating unit operable to communicate with a host device connected via a communication network,

10   wherein said sending unit is operable to send the name resolution request to the server at a time of an inquiry about an Internet connection status from the host device,

said Internet connection status determining unit is operable to determine the Internet connection status based on the response

15   to the name resolution request, and to store the determination result information that is a result of the determination into said storing unit, and

said communicating unit is operable to send back the determination result information, as a response to the inquiry, to the

20   host device.

[6]   The Internet connection terminal apparatus according to Claim 5,

wherein said communicating unit is operable to send back the

25   determination result information to the host device at the time of the inquiry about the Internet connection status from the host device, the determination result information having been determined and stored into said storing unit by said Internet connection status determining unit before the time of the inquiry.

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[7]   The Internet connection terminal apparatus according to Claim 5,

wherein said sending unit is operable to send the name resolution request to the server at a predetermined interval,

said Internet connection status determining unit is operable to determine an Internet connection status based on every response to the name resolution request, and to store determination result information that is a result of the determination into said storing unit, and

said communicating unit is operable to send back the determination result information stored in said storing unit to the host device, at the time of the inquiry about the Internet connection status from the host device.

[8]　The Internet connection terminal apparatus according to Claim 5,

wherein said communicating unit is operable to send back the response indicating a connected status to the host device without referring to said storing unit, in the case where the inquiry about the Internet connection status from the host device is a first inquiry.

[9]　An Internet connection status determining method for use in an Internet connection terminal apparatus which can be connected to the Internet via a relay device, said method comprising:

a sending step of sending, via the relay device, a name resolution request using a non-existing host name or domain name, to a server which performs a name resolution using a host name or a domain name; and

an Internet connection status determining step of determining, based on a response to the name resolution request, an Internet connection status that indicates whether or not the Internet connection terminal apparatus is connected to the Internet

[10]　The Internet connection status determining method according

to Claim 9,

wherein said Internet connection status determining step includes determining that the Internet connection terminal apparatus is connected to the Internet in the case where the response to the name resolution request has been sent back within a predetermined period of time, and determining that the Internet connection terminal apparatus is not connected to the Internet in the case where the response to the name resolution request has not been sent back within the predetermined period of time.

[11]　The Internet connection status determining method according to Claim 10,

wherein the response to the name resolution request is a response which corresponds to a failure of the name resolution in the server.

[12]　The Internet connection status determining method according to Claim 9,

wherein the server is a Domain Name System (DNS) server.

[13]　The Internet connection status determining method according to Claim 9,

wherein the Internet connection terminal apparatus includes

a storing unit operable to store determination result information that indicates the Internet connection status obtained in said Internet connection status determining step,

said Internet connection status determining method further comprises

a communicating step of communicating with a host device connected via a communication network,

said sending step includes sending the name resolution request to the server at a time of an inquiry about an Internet

connection status from the host device,

said Internet connection status determining step includes determining the Internet connection status based on the response to the name resolution request, and storing the determination result information that is a result of said determining into the storing unit, and

said communicating step includes sending back the determination result information, as a response to the inquiry, to the host device.

[14]   The Internet connection status determining method according to Claim 13,

wherein said communicating step includes sending back the determination result information to the host device at the time of the inquiry about the Internet connection status from the host device, the determination result information having been determined and stored into the storing unit in said Internet connection status determining step before the time of the inquiry.

[15]   The Internet connection status determining method according to Claim 13,

wherein said sending step includes sending the name resolution request to the server at a predetermined interval,

said Internet connection status determining step includes determining an Internet connection status based on every response to the name resolution request, and storing determination result information that is a result of said determining into the storing unit, and

said communicating step includes sending back the determination result information stored in the storing unit to the host device, at the time of the inquiry about the Internet connection status from the host device.

[16]   The Internet connection status determining method according to Claim 13,

wherein said communicating step includes sending back the response indicating a connected status to the host device without referring to the storing unit, in the case where the inquiry about the Internet connection status from the host device is a first inquiry.

[17]   A program for causing a computer to realize the steps of the Internet connection status determining method according to Claim 9.

[18]   A computer readable recording medium on which the program according to Claim 17 is recorded.